Laboratory Report of Analysis

To: Stantec Consulting Services Inc.
725 East Fireweed Lane Suite 200
Anchorage, AK 99503
(907)248-8883

Report Number: **1180277**

Client Project: **Wasilla WWTP**

Dear John Marshall,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Justin Nelson
2018.01.26
08:17:02 -09'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Print Date: 01/24/2018 8:01:19AM

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1180277**
Project Name/Site: **Wasilla WWTP**
Project Contact: **John Marshall**

Refer to sample receipt form for information on sample condition.

1180276002DUP (1432008) DUP

2540D - Total Suspended Solids - Sample duplicate RPD was outside of acceptance limits. The difference between sample and duplicate results is less than the LOQ.

1180277005MS (1432051) MS

4500NO3-F - Nitrate/Nitrite - MS recovery for Total Nitrate/Nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

1180277005MSD (1432052) MSD

4500NO3-F - Nitrate/Nitrite - MSD recovery for Total Nitrate/Nitrite is outside of QC criteria. Refer to LCS for accuracy requirements.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are **AK00971 DW Chemistry (Provisionally Certified as of 10/12/2017) & Microbiology (Provisionally Certified as of 9/21/2017)** & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
SW 5	1180277001	01/17/2018	01/17/2018	Water (Surface, Eff., Ground)
SW 15	1180277002	01/17/2018	01/17/2018	Water (Surface, Eff., Ground)
SW 17	1180277003	01/17/2018	01/17/2018	Water (Surface, Eff., Ground)
SW 18	1180277004	01/17/2018	01/17/2018	Water (Surface, Eff., Ground)
Dup 1	1180277005	01/17/2018	01/17/2018	Water (Surface, Eff., Ground)

Method	Method Description
SM21 4500-NH3 G	Ammonia-N (W) SM21 4500-NH3 G
SM21 5210B	Biochemical Oxygen Demand SM21 5210B
SM21 9222D	Fecal Coliform (MF)
SM21 4500NO3-F	Flow Injection Analysis
SM21 4500-N D	TKN by Phenate (W)
SM21 9223B	Total Coliform P/A Quant Tray
SM21 4500P-B,E	Total Phosphorus (W)
SM21 2540D	Total Suspended Solids SM20 2540D

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Detectable Results Summary

Client Sample ID: **SW 5**
Lab Sample ID: 1180277001

	Parameter	Result	Units
Microbiology Laboratory	Fecal Coliform	1.0	col/100mL
	Total Coliform	14	MPN/100mL
Waters Department	Ammonia-N	0.221	mg/L
	Nitrate-N	0.0256J	mg/L
	Nitrite-N	0.0302J	mg/L
	Total Kjeldahl Nitrogen	0.378J	mg/L
	Total Phosphorus	0.0178J	mg/L

Client Sample ID: **SW 15**
Lab Sample ID: 1180277002

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	4	MPN/100mL
	Fecal Coliform	3.0	col/100mL
	Total Coliform	91	MPN/100mL
Waters Department	Ammonia-N	0.141	mg/L
	Nitrate-N	0.0322J	mg/L
	Nitrite-N	0.0294J	mg/L
	Total Phosphorus	0.0532	mg/L
	Total Suspended Solids	2.96	mg/L

Client Sample ID: **SW 17**
Lab Sample ID: 1180277003

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	6	MPN/100mL
	Total Coliform	88	MPN/100mL
Waters Department	Ammonia-N	0.433	mg/L
	Nitrate-N	2.88	mg/L
	Nitrite-N	0.0398J	mg/L
	Total Kjeldahl Nitrogen	0.649J	mg/L
	Total Phosphorus	0.196	mg/L
	Total Suspended Solids	0.722J	mg/L

Client Sample ID: **SW 18**
Lab Sample ID: 1180277004

	Parameter	Result	Units
Microbiology Laboratory	E. Coli	5	MPN/100mL
	Fecal Coliform	1.0	col/100mL
	Total Coliform	161	MPN/100mL
Waters Department	Ammonia-N	0.242	mg/L
	Nitrate-N	3.89	mg/L
	Nitrite-N	0.0332J	mg/L
	Total Kjeldahl Nitrogen	0.490J	mg/L
	Total Phosphorus	0.682	mg/L
	Total Suspended Solids	2.42	mg/L

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Detectable Results Summary

Client Sample ID: **Dup 1**
Lab Sample ID: 1180277005
Microbiology Laboratory
Waters Department

Parameter	Result	Units
Total Coliform	19	MPN/100mL
Ammonia-N	0.247	mg/L
Nitrate-N	0.0346J	mg/L
Nitrite-N	0.0280J	mg/L
Total Kjeldahl Nitrogen	0.329J	mg/L
Total Phosphorus	0.0238	mg/L

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Results of **SW 5**

Client Sample ID: **SW 5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277001
Lab Project ID: 1180277

Collection Date: 01/17/18 10:54
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00	U	2.00	2.00	mg/L	1		01/18/18 15:50

Batch Information

Analytical Batch: BOD5946
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 01/18/18 15:50
Container ID: 1180277001-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.0		1.00	1.00	col/100mL	1		01/17/18 18:17

Batch Information

Analytical Batch: BTF16253
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 01/17/18 18:17
Container ID: 1180277001-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		01/17/18 18:48
Total Coliform	14		1	1	MPN/100m	1		01/17/18 18:48

Batch Information

Analytical Batch: BTF16254
Analytical Method: SM21 9223B
Analyst: K.W
Analytical Date/Time: 01/17/18 18:48
Container ID: 1180277001-A

Results of **SW 5**

Client Sample ID: **SW 5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277001
Lab Project ID: 1180277

Collection Date: 01/17/18 10:54
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	1.11	U	2.22	0.689	mg/L	1		01/18/18 09:50

Batch Information

Analytical Batch: STS5764
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 01/18/18 09:50
Container ID: 1180277001-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.378	J	1.00	0.310	mg/L	1		01/19/18 12:41

Batch Information

Analytical Batch: WDA4179
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/19/18 12:41
Container ID: 1180277001-E

Prep Batch: WXX12180
Prep Method: METHOD
Prep Date/Time: 01/18/18 17:09
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.221		0.100	0.0310	mg/L	1		01/22/18 11:18

Batch Information

Analytical Batch: WDA4180
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 01/22/18 11:18
Container ID: 1180277001-E

Prep Batch: WXX12181
Prep Method: METHOD
Prep Date/Time: 01/22/18 10:15
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0256	J	0.100	0.0250	mg/L	2		01/18/18 12:12
Nitrite-N	0.0302	J	0.100	0.0250	mg/L	2		01/18/18 12:12

Print Date: 01/24/2018 8:01:26AM

J flagging is activated

Results of **SW 5**

Client Sample ID: **SW 5**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277001
Lab Project ID: 1180277

Collection Date: 01/17/18 10:54
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2635
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 01/18/18 12:12
Container ID: 1180277001-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0178	J	0.0200	0.00500	mg/L	1		01/18/18 14:16

Batch Information

Analytical Batch: WDA4177
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 01/18/18 14:16
Container ID: 1180277001-D

Prep Batch: WXX12178
Prep Method: SM21 4500P-B,E
Prep Date/Time: 01/18/18 12:51
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Results of **SW 15**

Client Sample ID: **SW 15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277002
Lab Project ID: 1180277

Collection Date: 01/17/18 11:34
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00 U		2.00	2.00	mg/L	1		01/18/18 15:50

Batch Information

Analytical Batch: BOD5946
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 01/18/18 15:50
Container ID: 1180277002-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	3.0		1.00	1.00	col/100mL	1		01/17/18 18:17

Batch Information

Analytical Batch: BTF16253
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 01/17/18 18:17
Container ID: 1180277002-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	4		1	1	MPN/100m	1		01/17/18 18:48
Total Coliform	91		1	1	MPN/100m	1		01/17/18 18:48

Batch Information

Analytical Batch: BTF16254
Analytical Method: SM21 9223B
Analyst: K.W
Analytical Date/Time: 01/17/18 18:48
Container ID: 1180277002-A

Results of **SW 15**

Client Sample ID: **SW 15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277002
Lab Project ID: 1180277

Collection Date: 01/17/18 11:34
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	2.96		1.02	0.316	mg/L	1		01/18/18 09:50

Batch Information

Analytical Batch: STS5764
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 01/18/18 09:50
Container ID: 1180277002-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.500 U		1.00	0.310	mg/L	1		01/19/18 12:42

Batch Information

Analytical Batch: WDA4179
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/19/18 12:42
Container ID: 1180277002-E

Prep Batch: WXX12180
Prep Method: METHOD
Prep Date/Time: 01/18/18 17:09
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.141		0.100	0.0310	mg/L	1		01/22/18 11:20

Batch Information

Analytical Batch: WDA4180
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 01/22/18 11:20
Container ID: 1180277002-E

Prep Batch: WXX12181
Prep Method: METHOD
Prep Date/Time: 01/22/18 10:15
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0322 J		0.100	0.0250	mg/L	2		01/18/18 12:13
Nitrite-N	0.0294 J		0.100	0.0250	mg/L	2		01/18/18 12:13

Print Date: 01/24/2018 8:01:26AM

J flagging is activated

Results of **SW 15**

Client Sample ID: **SW 15**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277002
Lab Project ID: 1180277

Collection Date: 01/17/18 11:34
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2635
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 01/18/18 12:13
Container ID: 1180277002-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0532		0.0200	0.00500	mg/L	1		01/18/18 14:19

Batch Information

Analytical Batch: WDA4177
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 01/18/18 14:19
Container ID: 1180277002-D

Prep Batch: WXX12178
Prep Method: SM21 4500P-B,E
Prep Date/Time: 01/18/18 12:51
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW 17**

Client Sample ID: **SW 17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277003
Lab Project ID: 1180277

Collection Date: 01/17/18 12:04
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00 U		2.00	2.00	mg/L	1		01/18/18 15:50

Batch Information

Analytical Batch: BOD5946
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 01/18/18 15:50
Container ID: 1180277003-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00 U		1.00	1.00	col/100mL	1		01/17/18 18:17

Batch Information

Analytical Batch: BTF16253
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 01/17/18 18:17
Container ID: 1180277003-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	6		1	1	MPN/100m	1		01/17/18 18:48
Total Coliform	88		1	1	MPN/100m	1		01/17/18 18:48

Batch Information

Analytical Batch: BTF16254
Analytical Method: SM21 9223B
Analyst: K.W
Analytical Date/Time: 01/17/18 18:48
Container ID: 1180277003-A

Print Date: 01/24/2018 8:01:26AM

J flagging is activated

Results of **SW 17**

Client Sample ID: **SW 17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277003
Lab Project ID: 1180277

Collection Date: 01/17/18 12:04
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	0.722	J	1.03	0.320	mg/L	1		01/18/18 09:50

Batch Information

Analytical Batch: STS5764
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 01/18/18 09:50
Container ID: 1180277003-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.649	J	1.00	0.310	mg/L	1		01/19/18 12:43

Batch Information

Analytical Batch: WDA4179
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/19/18 12:43
Container ID: 1180277003-E

Prep Batch: WXX12180
Prep Method: METHOD
Prep Date/Time: 01/18/18 17:09
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.433		0.100	0.0310	mg/L	1		01/22/18 11:09

Batch Information

Analytical Batch: WDA4180
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 01/22/18 11:09
Container ID: 1180277003-E

Prep Batch: WXX12181
Prep Method: METHOD
Prep Date/Time: 01/22/18 10:15
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	2.88		0.100	0.0250	mg/L	2		01/18/18 12:15
Nitrite-N	0.0398	J	0.100	0.0250	mg/L	2		01/18/18 12:15

Print Date: 01/24/2018 8:01:26AM

J flagging is activated

Results of **SW 17**

Client Sample ID: **SW 17**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277003
Lab Project ID: 1180277

Collection Date: 01/17/18 12:04
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2635
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 01/18/18 12:15
Container ID: 1180277003-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.196		0.0200	0.00500	mg/L	1		01/18/18 14:20

Batch Information

Analytical Batch: WDA4177
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 01/18/18 14:20
Container ID: 1180277003-D

Prep Batch: WXX12178
Prep Method: SM21 4500P-B,E
Prep Date/Time: 01/18/18 12:51
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Results of **SW 18**

Client Sample ID: **SW 18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277004
Lab Project ID: 1180277

Collection Date: 01/17/18 12:48
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00 U		2.00	2.00	mg/L	1		01/18/18 15:50

Batch Information

Analytical Batch: BOD5946
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 01/18/18 15:50
Container ID: 1180277004-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.0		1.00	1.00	col/100mL	1		01/17/18 18:17

Batch Information

Analytical Batch: BTF16253
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 01/17/18 18:17
Container ID: 1180277004-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	5		1	1	MPN/100m	1		01/17/18 18:48
Total Coliform	161		1	1	MPN/100m	1		01/17/18 18:48

Batch Information

Analytical Batch: BTF16254
Analytical Method: SM21 9223B
Analyst: K.W
Analytical Date/Time: 01/17/18 18:48
Container ID: 1180277004-A

Results of **SW 18**

Client Sample ID: **SW 18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277004
Lab Project ID: 1180277

Collection Date: 01/17/18 12:48
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	2.42		1.05	0.326	mg/L	1		01/18/18 09:50

Batch Information

Analytical Batch: STS5764
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 01/18/18 09:50
Container ID: 1180277004-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.490 J		1.00	0.310	mg/L	1		01/19/18 12:37

Batch Information

Analytical Batch: WDA4179
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/19/18 12:37
Container ID: 1180277004-E

Prep Batch: WXX12180
Prep Method: METHOD
Prep Date/Time: 01/18/18 17:09
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.242		0.100	0.0310	mg/L	1		01/22/18 11:24

Batch Information

Analytical Batch: WDA4180
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 01/22/18 11:24
Container ID: 1180277004-E

Prep Batch: WXX12181
Prep Method: METHOD
Prep Date/Time: 01/22/18 10:15
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	3.89		0.100	0.0250	mg/L	2		01/18/18 12:17
Nitrite-N	0.0332 J		0.100	0.0250	mg/L	2		01/18/18 12:17

Print Date: 01/24/2018 8:01:26AM

J flagging is activated

Results of **SW 18**

Client Sample ID: **SW 18**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277004
Lab Project ID: 1180277

Collection Date: 01/17/18 12:48
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2635
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 01/18/18 12:17
Container ID: 1180277004-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.682		0.200	0.0500	mg/L	1		01/18/18 18:36

Batch Information

Analytical Batch: WDA4178
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 01/18/18 18:36
Container ID: 1180277004-D

Prep Batch: WXX12179
Prep Method: SM21 4500P-B,E
Prep Date/Time: 01/18/18 16:55
Prep Initial Wt./Vol.: 2.5 mL
Prep Extract Vol: 25 mL

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Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277005
Lab Project ID: 1180277

Collection Date: 01/17/18 10:54
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Microbiology Laboratory**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Biochemical Oxygen Demand	2.00	U	2.00	2.00	mg/L	1		01/18/18 15:50

Batch Information

Analytical Batch: BOD5946
Analytical Method: SM21 5210B
Analyst: S.D
Analytical Date/Time: 01/18/18 15:50
Container ID: 1180277005-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Fecal Coliform	1.00	U	1.00	1.00	col/100mL	1		01/17/18 18:17

Batch Information

Analytical Batch: BTF16253
Analytical Method: SM21 9222D
Analyst: K.W
Analytical Date/Time: 01/17/18 18:17
Container ID: 1180277005-B

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
E. Coli	1	U	1	1	MPN/100m	1		01/17/18 18:48
Total Coliform	19		1	1	MPN/100m	1		01/17/18 18:48

Batch Information

Analytical Batch: BTF16254
Analytical Method: SM21 9223B
Analyst: K.W
Analytical Date/Time: 01/17/18 18:48
Container ID: 1180277005-A

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277005
Lab Project ID: 1180277

Collection Date: 01/17/18 10:54
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	0.555	U	1.11	0.344	mg/L	1		01/18/18 09:50

Batch Information

Analytical Batch: STS5764
Analytical Method: SM21 2540D
Analyst: EWW
Analytical Date/Time: 01/18/18 09:50
Container ID: 1180277005-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Kjeldahl Nitrogen	0.329	J	1.00	0.310	mg/L	1		01/19/18 12:44

Batch Information

Analytical Batch: WDA4179
Analytical Method: SM21 4500-N D
Analyst: DMM
Analytical Date/Time: 01/19/18 12:44
Container ID: 1180277005-E

Prep Batch: WXX12180
Prep Method: METHOD
Prep Date/Time: 01/18/18 17:09
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Ammonia-N	0.247		0.100	0.0310	mg/L	1		01/22/18 11:26

Batch Information

Analytical Batch: WDA4180
Analytical Method: SM21 4500-NH3 G
Analyst: DMM
Analytical Date/Time: 01/22/18 11:26
Container ID: 1180277005-E

Prep Batch: WXX12181
Prep Method: METHOD
Prep Date/Time: 01/22/18 10:15
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0346	J	0.100	0.0250	mg/L	2		01/18/18 12:19
Nitrite-N	0.0280	J	0.100	0.0250	mg/L	2		01/18/18 12:19

Print Date: 01/24/2018 8:01:26AM

J flagging is activated

Results of **Dup 1**

Client Sample ID: **Dup 1**
Client Project ID: **Wasilla WWTP**
Lab Sample ID: 1180277005
Lab Project ID: 1180277

Collection Date: 01/17/18 10:54
Received Date: 01/17/18 16:54
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2635
Analytical Method: SM21 4500NO3-F
Analyst: AYC
Analytical Date/Time: 01/18/18 12:19
Container ID: 1180277005-C

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Phosphorus	0.0238		0.0200	0.00500	mg/L	1		01/18/18 14:21

Batch Information

Analytical Batch: WDA4177
Analytical Method: SM21 4500P-B,E
Analyst: DMM
Analytical Date/Time: 01/18/18 14:21
Container ID: 1180277005-D

Prep Batch: WXX12178
Prep Method: SM21 4500P-B,E
Prep Date/Time: 01/18/18 12:51
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Method Blank

Blank ID: MB for HBN 1774438 [BOD/5946]
Blank Lab ID: 1432103

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 5210B**

Parameter	Results	LOQ/CL	DL	Units
Biochemical Oxygen Demand	2.00U	2.00	2.00	mg/L

Batch Information

Analytical Batch: BOD5946
Analytical Method: SM21 5210B
Instrument:
Analyst: S.D
Analytical Date/Time: 1/18/2018 3:50:00PM

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1180277 [BOD5946]
Blank Spike Lab ID: 1432104
Date Analyzed: 01/18/2018 15:50

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 5210B**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Biochemical Oxygen Demand	198	214	108	(84.6-115.4

Batch Information

Analytical Batch: **BOD5946**
Analytical Method: **SM21 5210B**
Instrument:
Analyst: **S.D**

Print Date: 01/24/2018 8:01:33AM

Method Blank

Blank ID: MB for HBN 1774344 [BTF/16253]
Blank Lab ID: 1431970

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 9222D**

Parameter	Results	LOQ/CL	DL	Units
Fecal Coliform	1.00U	1.00	1.00	col/100mL

Batch Information

Analytical Batch: BTF16253
Analytical Method: SM21 9222D
Instrument:
Analyst: K.W
Analytical Date/Time: 1/17/2018 6:17:00PM

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Method Blank

Blank ID: MB for HBN 1774345 [BTF/16254]
Blank Lab ID: 1431972

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 9223B**

Parameter	Results	LOQ/CL	DL	Units
Total Coliform	1U	1	1	MPN/100m
E. Coli	1U	1	1	MPN/100m

Batch Information

Analytical Batch: BTF16254
Analytical Method: SM21 9223B
Instrument:
Analyst: K.W
Analytical Date/Time: 1/17/2018 6:48:00PM

Print Date: 01/24/2018 8:01:36AM

Method Blank

Blank ID: MB for HBN 1774417 [STS/5764]
Blank Lab ID: 1432005

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS5764
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW
Analytical Date/Time: 1/18/2018 9:50:18AM

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Duplicate Sample Summary

Original Sample ID: 1180276002
Duplicate Sample ID: 1432008
QC for Samples:
1180277001

Analysis Date: 01/18/2018 09:50
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	0.900J	1.31	mg/L	37.30*	(< 5)

Batch Information

Analytical Batch: STS5764
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 01/24/2018 8:01:41AM

Duplicate Sample Summary

Original Sample ID: 1180277001
Duplicate Sample ID: 1432009
Analysis Date: 01/18/2018 09:50
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	ND	1.11U	mg/L	0.00	(< 5)

Batch Information

Analytical Batch: STS5764
Analytical Method: SM21 2540D
Instrument:
Analyst: EWW

Print Date: 01/24/2018 8:01:41AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1180277 [STS5764]
Blank Spike Lab ID: 1432006
Date Analyzed: 01/18/2018 09:50

Spike Duplicate ID: LCSD for HBN 1180277 [STS5764]
Spike Duplicate Lab ID: 1432007
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	50	46.7	93	50	48.8	98	(75-125)	4.40	(< 5)

Batch Information

Analytical Batch: **STS5764**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **EWW**

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Method Blank

Blank ID: MB for HBN 1774427 (WFI/2635)
Blank Lab ID: 1432059

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0500U	0.100	0.0250	mg/L
Nitrite-N	0.0500U	0.100	0.0250	mg/L
Total Nitrate/Nitrite-N	0.0272J	0.100	0.0250	mg/L

Batch Information

Analytical Batch: WFI2635
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 1/18/2018 12:08:33PM

Print Date: 01/24/2018 8:01:45AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1180277 [WFI2635]
Blank Spike Lab ID: 1432060
Date Analyzed: 01/18/2018 12:06

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.64	105	(70-130)
Nitrite-N	2.5	2.32	93	(90-110)
Total Nitrate/Nitrite-N	5	4.96	99	(90-110)

Batch Information

Analytical Batch: **WFI2635**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **AYC**

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Matrix Spike Summary

Original Sample ID: 1180277005
MS Sample ID: 1432051 MS
MSD Sample ID: 1432052 MSD

Analysis Date: 01/18/2018 12:19
Analysis Date: 01/18/2018 12:20
Analysis Date: 01/18/2018 12:22
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)				Spike Duplicate (mg/L)						
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
Nitrate-N	0.0346J	2.50	2.95	117		2.50	2.95	117		70-130	0.10	(< 25)
Nitrite-N	0.0280J	2.50	2.03	80	*	2.50	2.07	82	*	90-110	2.10	(< 25)

Batch Information

Analytical Batch: WFI2635
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: AYC
Analytical Date/Time: 1/18/2018 12:20:49PM

Print Date: 01/24/2018 8:01:48AM

Method Blank

Blank ID: MB for HBN 1774435 [WXX/12178]
Blank Lab ID: 1432084

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277001, 1180277002, 1180277003, 1180277005

Results by **SM21 4500P-B,E**

Parameter	Results	LOQ/CL	DL	Units
Total Phosphorus	0.0100U	0.0200	0.00500	mg/L

Batch Information

Analytical Batch: WDA4177
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/18/2018 2:13:57PM

Prep Batch: WXX12178
Prep Method: SM21 4500P-B,E
Prep Date/Time: 1/18/2018 12:51:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1180277 [WXX12178]
Blank Spike Lab ID: 1432085
Date Analyzed: 01/18/2018 14:14

Spike Duplicate ID: LCSD for HBN 1180277 [WXX12178]
Spike Duplicate Lab ID: 1432086
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277005

Results by **SM21 4500P-B,E**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.2	0.192	96	0.2	0.193	97	(85-115)	0.57	(< 25)

Batch Information

Analytical Batch: **WDA4177**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12178**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **01/18/2018 12:51**
Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1180277001
MS Sample ID: 1432087 MS
MSD Sample ID: 1432088 MSD

Analysis Date: 01/18/2018 14:16
Analysis Date: 01/18/2018 14:17
Analysis Date: 01/18/2018 14:18
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277005

Results by **SM21 4500P-B,E**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.0178J	0.200	.21	96	0.200	0.205	93	75-125	2.40	(< 25)

Batch Information

Analytical Batch: WDA4177
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/18/2018 2:17:53PM

Prep Batch: WXX12178
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 1/18/2018 12:51:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

Print Date: 01/24/2018 8:01:53AM

Method Blank

Blank ID: MB for HBN 1774526 [WXX/12179]
Blank Lab ID: 1432168

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277004

Results by **SM21 4500P-B,E**

Parameter	Results	LOQ/CL	DL	Units
Total Phosphorus	0.0100U	0.0200	0.00500	mg/L

Batch Information

Analytical Batch: WDA4178
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/18/2018 6:33:57PM

Prep Batch: WXX12179
Prep Method: SM21 4500P-B,E
Prep Date/Time: 1/18/2018 4:55:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1180277 [WXX12179]
Blank Spike Lab ID: 1432169
Date Analyzed: 01/18/2018 18:34

Spike Duplicate ID: LCSD for HBN 1180277 [WXX12179]
Spike Duplicate Lab ID: 1432170
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277004

Results by **SM21 4500P-B,E**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.2	0.198	99	0.2	0.193	96	(85-115)	2.40	(< 25)

Batch Information

Analytical Batch: **WDA4178**
Analytical Method: **SM21 4500P-B,E**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12179**
Prep Method: **SM21 4500P-B,E**
Prep Date/Time: **01/18/2018 16:55**
Spike Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 0.2 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1180277004
MS Sample ID: 1432171 MS
MSD Sample ID: 1432172 MSD

QC for Samples: 1180277004

Analysis Date: 01/18/2018 18:36
Analysis Date: 01/18/2018 18:37
Analysis Date: 01/18/2018 18:38
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500P-B,E**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Phosphorus	0.682	2.00	2.68	100	2.00	2.75	104	75-125	2.80	(< 25)

Batch Information

Analytical Batch: WDA4178
Analytical Method: SM21 4500P-B,E
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/18/2018 6:37:22PM

Prep Batch: WXX12179
Prep Method: Total Phosphorus (W) Ext.
Prep Date/Time: 1/18/2018 4:55:00PM
Prep Initial Wt./Vol.: 2.50mL
Prep Extract Vol: 25.00mL

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Method Blank

Blank ID: MB for HBN 1774528 [WXX/12180]
Blank Lab ID: 1432179

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500-N D**

Parameter	Results	LOQ/CL	DL	Units
Total Kjeldahl Nitrogen	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: WDA4179
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/19/2018 12:33:24PM

Prep Batch: WXX12180
Prep Method: METHOD
Prep Date/Time: 1/18/2018 5:09:00PM
Prep Initial Wt./Vol.: 25 mL
Prep Extract Vol: 25 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1180277 [WXX12180]
Blank Spike Lab ID: 1432180
Date Analyzed: 01/19/2018 12:34

Spike Duplicate ID: LCSD for HBN 1180277 [WXX12180]
Spike Duplicate Lab ID: 1432181
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500-N D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	4	3.30	83	4	3.37	84	(75-125)	2.00	(< 25)

Batch Information

Analytical Batch: **WDA4179**
Analytical Method: **SM21 4500-N D**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12180**
Prep Method: **METHOD**
Prep Date/Time: **01/18/2018 17:09**
Spike Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL
Dupe Init Wt./Vol.: 4 mg/L Extract Vol: 25 mL

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Matrix Spike Summary

Original Sample ID: 1180277004
MS Sample ID: 1432182 MS
MSD Sample ID: 1432183 MSD

Analysis Date: 01/19/2018 12:37
Analysis Date: 01/19/2018 12:38
Analysis Date: 01/19/2018 12:39
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500-N D**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Kjeldahl Nitrogen	0.490J	4.00	4.15	91	4.00	3.56	77	75-125	15.20	(< 25)

Batch Information

Analytical Batch: WDA4179
Analytical Method: SM21 4500-N D
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/19/2018 12:38:34PM

Prep Batch: WXX12180
Prep Method: Distillation TKN by Phenate (W)
Prep Date/Time: 1/18/2018 5:09:00PM
Prep Initial Wt./Vol.: 25.00mL
Prep Extract Vol: 25.00mL

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Method Blank

Blank ID: MB for HBN 1774623 [WXX/12181]
Blank Lab ID: 1432264

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500-NH3 G**

Parameter	Results	LOQ/CL	DL	Units
Ammonia-N	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WDA4180
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/22/2018 11:04:54AM

Prep Batch: WXX12181
Prep Method: METHOD
Prep Date/Time: 1/22/2018 10:15:00AM
Prep Initial Wt./Vol.: 6 mL
Prep Extract Vol: 6 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1180277 [WXX12181]
Blank Spike Lab ID: 1432265
Date Analyzed: 01/22/2018 11:06

Spike Duplicate ID: LCSD for HBN 1180277 [WXX12181]
Spike Duplicate Lab ID: 1432266
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500-NH3 G**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	1	1.11	111	1	1.11	111	(75-125)	0.16	(< 25)

Batch Information

Analytical Batch: **WDA4180**
Analytical Method: **SM21 4500-NH3 G**
Instrument: **Discrete Analyzer 2**
Analyst: **DMM**

Prep Batch: **WXX12181**
Prep Method: **METHOD**
Prep Date/Time: **01/22/2018 10:15**
Spike Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL
Dupe Init Wt./Vol.: 1 mg/L Extract Vol: 6 mL

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Matrix Spike Summary

Original Sample ID: 1180277003
MS Sample ID: 1432267 MS
MSD Sample ID: 1432268 MSD

Analysis Date: 01/22/2018 11:09
Analysis Date: 01/22/2018 11:11
Analysis Date: 01/22/2018 11:13
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1180277001, 1180277002, 1180277003, 1180277004, 1180277005

Results by **SM21 4500-NH3 G**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Ammonia-N	0.433	1.00	1.35	92	1.00	1.38	95	75-125	2.30	(< 25)

Batch Information

Analytical Batch: WDA4180
Analytical Method: SM21 4500-NH3 G
Instrument: Discrete Analyzer 2
Analyst: DMM
Analytical Date/Time: 1/22/2018 11:11:38AM

Prep Batch: WXX12181
Prep Method: Ammonia by SM21 4500F prep (W)
Prep Date/Time: 1/22/2018 10:15:00AM
Prep Initial Wt./Vol.: 6.00mL
Prep Extract Vol: 6.00mL

Print Date: 01/24/2018 8:02:05AM

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1180277

Locations Nationwide
Alaska Maryland
New Jersey New York
North Carolina Indiana
West Virgina Kentucky
www.us.sgs.com

Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Page 1 of 1

Section 1

CLIENT: Stantec

CONTACT: Jake Alward or John Marshall PHONE NO: 343-5202

PROJECT NAME: Wasilla WWTP PROJECT/ PWSID/ PERMIT#:

REPORTS TO: E-MAIL: john.marshall@stantec.com

INVOICE TO: QUOTE #: P.O. #: 204700415

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Type C = COMP G = GRAB MI = Multi Incre-mental Soils	Preservative: 1	1	H_2SO_4	H_2SO_4	H_2SO_4	1	$Na_2S_2O_3$	$NaHSO_4$			REMARKS/ LOC ID
							BOD	TSS	TKN	Ammonia	TP	Nitrate/Nitrite	FC	TC (Quant			
(1) A-6	SW5	01/17/18	10:54		7	G	1	1	1	1	1	1	1	1			
(2) A-6	SW 15	1/17/18	11:34		7	G	1	1	1	1	1	1	1	1			
(3) A-6	SW 17	1/17/18	12:04		7	G	1	1	1	1	1	1	1	1			
(4) A-6	SW 18	1/17/18	12:48		7	G	1	1	1	1	1	1	1	1			
(5) A-6	Dup1	1/17/18	10:54		7	G	1	1	1	1	1	1	1	1			

Section 5

	Date	Time	
Relinquished By: (1)	1/17/18	16:54	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	1/17/18	16:54	Received For Laboratory By:

Section 4

DOD Project? Yes No

Cooler ID:

Data Deliverable Requirements:

Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 2.3 D41

or Ambient [ ]

(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)

INTACT BROKEN ABSENT

(See attached Sample Receipt Form)

HD

[ ] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
[ ] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

e-Sample Receipt Form

SGS Workorder #: **1180277**

1 1 8 0 2 7 7

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		Yes — Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	Hand Delivered
COC accompanied samples?	Yes	
Yes **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 2.3 °C Therm. ID: D41
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
If samples received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)? **Note: If times differ <1hr, record details & login per COC.	Yes	
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)	Yes	
	N/A	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	

Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

Additional notes (if applicable):

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1180277001-A	Na2S2O3 for Chlorine Redu	OK			
1180277001-B	Na2S2O3 for Chlorine Redu	OK			
1180277001-C	No Preservative Required	OK			
1180277001-D	H2SO4 to pH < 2	OK			
1180277001-E	H2SO4 to pH < 2	OK			
1180277001-F	No Preservative Required	OK			
1180277001-G	No Preservative Required	OK			
1180277002-A	Na2S2O3 for Chlorine Redu	OK			
1180277002-B	Na2S2O3 for Chlorine Redu	OK			
1180277002-C	No Preservative Required	OK			
1180277002-D	H2SO4 to pH < 2	OK			
1180277002-E	H2SO4 to pH < 2	OK			
1180277002-F	No Preservative Required	OK			
1180277002-G	No Preservative Required	OK			
1180277003-A	Na2S2O3 for Chlorine Redu	OK			
1180277003-B	Na2S2O3 for Chlorine Redu	OK			
1180277003-C	No Preservative Required	OK			
1180277003-D	H2SO4 to pH < 2	OK			
1180277003-E	H2SO4 to pH < 2	OK			
1180277003-F	No Preservative Required	OK			
1180277003-G	No Preservative Required	OK			
1180277004-A	Na2S2O3 for Chlorine Redu	OK			
1180277004-B	Na2S2O3 for Chlorine Redu	OK			
1180277004-C	No Preservative Required	OK			
1180277004-D	H2SO4 to pH < 2	OK			
1180277004-E	H2SO4 to pH < 2	OK			
1180277004-F	No Preservative Required	OK			
1180277004-G	No Preservative Required	OK			
1180277005-A	Na2S2O3 for Chlorine Redu	OK			
1180277005-B	Na2S2O3 for Chlorine Redu	OK			
1180277005-C	No Preservative Required	OK			
1180277005-D	H2SO4 to pH < 2	OK			
1180277005-E	H2SO4 to pH < 2	OK			
1180277005-F	No Preservative Required	OK			
1180277005-G	No Preservative Required	OK			

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.